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As a result of extensive studies, the present inventors have discovered that a di(meth)acrylate represented by the following Formula (1) is particularly preferred as the component (A). Of the di(meth)acrylate represented by Formula (1), one having a molecular weight of 1,000 or less is more preferred because of its large refractive index.

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Incidentally, the mechanism is unclear as to the phenomenon that the light transmittance and degree of cure of the resin are improved by the heating. It, however, can be presumed that, the heating accelerates the post-curing (a phenomenon that the curing of photosensitive resin proceeds gradually also after exposure) of the resin to enhance the degree of cure, and also, since in the heating step the curing reaction proceeds, the chemical structure of the resin is not destroyed by light and on the contrary any slight absorption sources caused in the resin layer at the time of curing are remedied on.

Please DELETE paragraph two (2) on page 39, lines 12-14.

IN THE CLAIMS:

Please AMEND the pending claims 1, 5, 7-9, 11-13, 15-16, 22, 34-36 and 38-39, CANCEL claims 2-4, 6, 23-30 and 40, and ADD new claims 41-47 in accordance with the following:

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1. (ONCE AMENDED) An optical element comprising:

a base member; and

a resin layer formed on the surface of the base member and comprising a cured product of a photosensitive resin composition, wherein said resin layer has at least one of the following features:

(a) a refractive index of 1.55 or more,

(b) a visible light inner transmittance of 95% or more in a 100 mm thick area,

(c) a rate of hygroscopic dimensional change of 0.4% or less,

(d) a durometer hardness of HDD 70 or more; and

(e) a glass transition temperature of 95°C or above.

5. (ONCE AMENDED) The optical element according to claim 1, wherein said resin layer having a gel percentage of 95% or more.

7. (ONCE AMENDED) The optical element according to claim 1, wherein said photosensitive resin composition having a rate of shrinkage on curing of 7% or less.

8. (ONCE AMENDED) The optical element according to claim 1, wherein said resin composition comprises:

(A) a polyfunctional (meth)acrylate;

(B) a polyfunctional urethanemodified (meth)acrylate; and

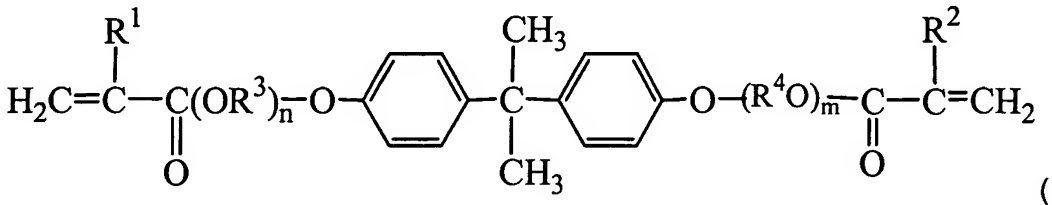
(C) a photopolymerization initiator.

9. (ONCE AMENDED) The optical element according to claim1, wherein said resin composition has a refractive index before polymerization curing of, 1.52 or more.

10. (ONCE AMENDED) The optical element according to claim 8, wherein said polyfunctional (meth)acrylate has a refractive index before polymerization curing, of 1.53 or more.

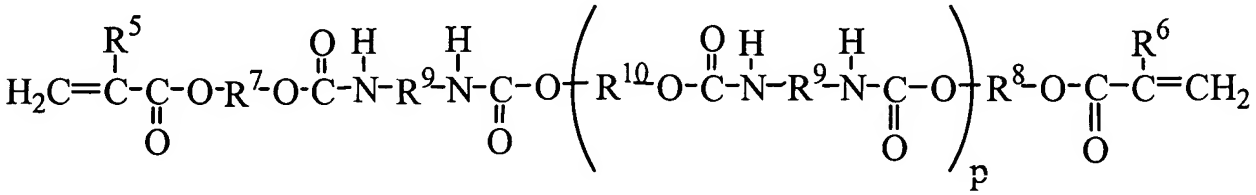
11. (ONCE AMENDED) The optical element according to claim 8, wherein said polyfunctional (meth)acrylate has two or more benzene ring structures in one molecule.

12. (ONCE AMENDED) The optical element according to claim 8, wherein said resin composition comprising, as at least a part of said polyfunctional (meth)acrylate, a di(meth)acrylate represented by the following Formula (1):



(1)

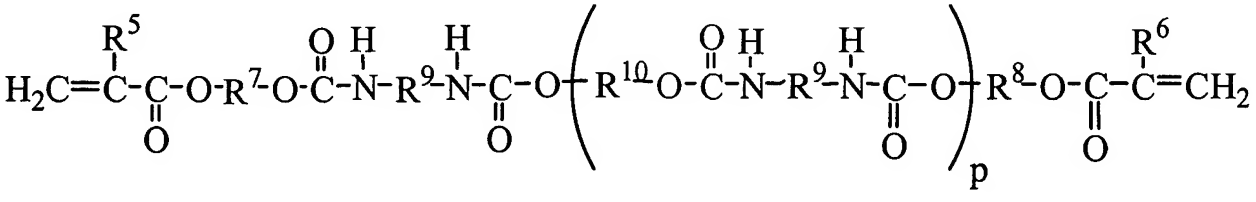
wherein R1 and R2 are each a hydrogen atom or a methyl group, R3 and R4 are each a hydrocarbon group having 2 to 4 carbon atoms, and m and n are each an integer of 1 or more.



13. (ONCE AMENDED) The optical element according to claim 8, wherein said polyfunctional (meth)acrylate has a molecular weight before polymerization curing, of 1,000 or less.

14. (UNAMENDED) The optical element according to claim 8, wherein said polyfunctional urethane modified (meth)acrylate has a refractive index before polymerization curing, of 1.48 or more.

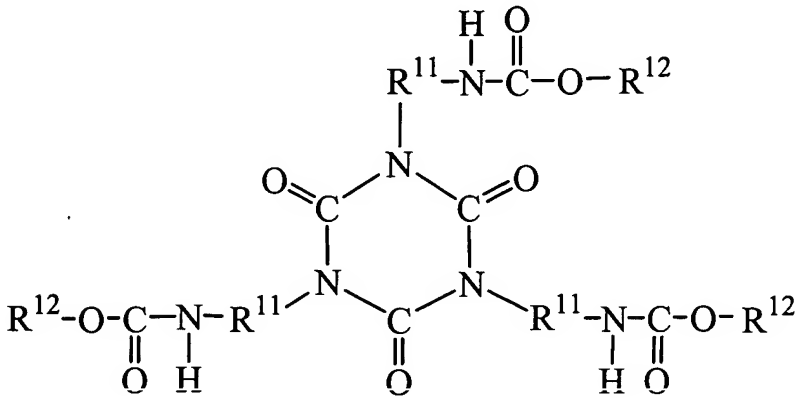
15. (ONCE AMENDED) The optical element according to claim 8, wherein said polyfunctional urethane modified (meth)acrylate contains at least one of compounds represented



by any of the following Formulas (2) to (4):

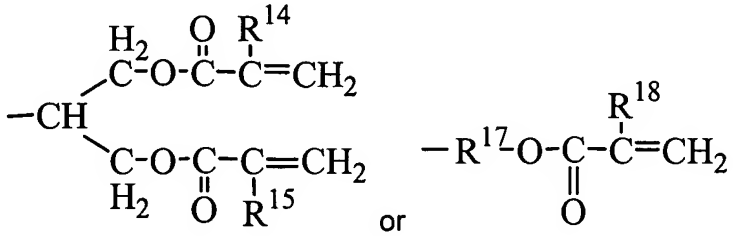
(2)

wherein R^5 and R^6 are each a hydrogen atom or a methyl group, R^7 and R^8 are each a hydrocarbon group having 1 to 10 carbon atoms, R^9 is an isocyanate residual group, R^{10} is a polyol residual group or a polyester residual group, and p is 0 or an integer of 10 or less.



(3)

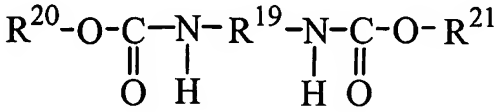
wherein R^{11} is a hydrocarbon group having 1 to 10 carbon atoms, and R^{12} is



or

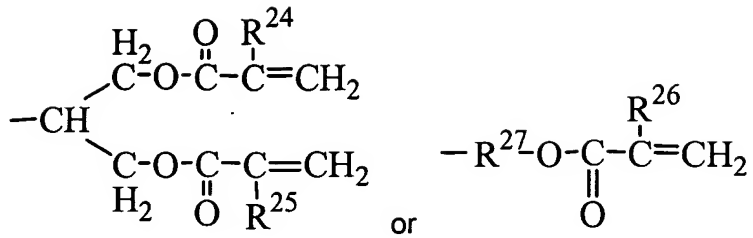
or

wherein R^{14}, R^{15} and R^{18} are each a hydrogen atom or a methyl group, and R^{17} is a hydrocarbon group having 1 to 10 carbon atoms;



(4)

wherein R^{19} is a hydrocarbon group having 1 to 10 carbon atoms, and R^{20} and R^{21} are each



wherein R^{24}, R^{25} and R^{26} are each a hydrogen atom or a methyl group, and R^{27} is a hydrocarbon group having 1 to 10 carbon atoms.

16. (ONCE AMENDED) An optical article having the optical element according to claim 1.

17. (UNAMENDED) The optical article according to claim 16, wherein;

said optical element is a lens; and

said optical article is a still camera.

18. (UNAMENDED) The optical article according to claim 16, wherein;

said optical element is a lens; and

said optical article is a video camera.

19. (UNAMENDED) The optical article according to claim 16, wherein;

said optical element is a lens; and

said optical article is an interchangeable lens.

20. (UNAMENDED) A process for producing a resincemented optical element, the process comprising:

a first exposure step of irradiating a photosensitive resin composition held between the surface of a base member and a mold tool, to cure the composition to form a resin layer;

a mold release step of moldreleasing the resin layer; and

a heating step of heating the resin layer, in this order.

21. (UNAMENDED) A process for producing a resincemented optical element, the process comprising:

a first exposure step of irradiating a photosensitive resin composition held between the surface of a base member and a mold tool, with heating to cure the composition to form a resin layer; and

a mold mold release step of moldreleasing the resin layer, in this order.

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22. (ONCE AMENDED) The production process according to claim 21, wherein the heating in said first exposure step is carried out at a temperature of from 40°C to 130°C.

31. (UNAMENDED) A process for producing a resincemented optical element, the process comprising one or more exposure steps of irradiating a photosensitive resin composition held between the surface of a base member and a molding tool, to cure the composition to form a resin layer;

at least one of said exposure steps being the step of irradiating the resin composition by light not comprising light with a wavelength of less than 300 nm.

32. (UNAMENDED) The process for producing a resincemented optical element according to claim 31, which further comprises a mold release step of moldreleasing the resin layer;

said step of irradiating the resin composition by the light not comprising light with a wavelength of less than 300 nm being a first exposure step carried out before said mold release step.

33. (UNAMENDED) The process for producing a resin cemented optical element according to claim 31, which further comprises a mold release step of mold releasing the resin layer;

said step of irradiating the resin composition by the light not comprising light with a wavelength of less than 300 nm being a second exposure step carried out after said mold release step.

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34. (ONCE AMENDED) The process for producing a resin cemented optical element according to claim 20, which further comprises, after said mold release step, a second exposure step of irradiating the resin layer by light not comprising light with a wavelength of less than 300 nm.

35. (ONCE AMENDED) The production process according to claim 31, wherein the irradiation in the step of irradiation by the light not comprising light with a wavelength of less than 300 nm is performed shutting out light with a wavelength of less than 300 nm among light emitted from a light source.

36. (ONCE AMENDED) The production process according to any one of claim 21, which further comprises, after said mold release step, a heating step of heating the resin layer.

37. (ONCE AMENDED) The production process according to claim 33, which further comprises, after said second exposure step, a heating step of heating the resin layer.

38. (ONCE AMENDED) The production process according to claim 20, wherein the heating in said heating step is carried out at a temperature of from 40°C to 130°C.

39. (ONCE AMENDED) The production process according to claim 20, wherein said resin composition comprises:

(A) a polyfunctional (meth)acrylate;

(B) a polyfunctional urethanemodified (meth)acrylate; and

(C) a photopolymerization initiator.

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41. (NEW) The process for producing a resincemented optical element according to claim 21, which further comprises, after said mold release step, a second exposure step of irradiating the resin layer by light not comprising light with a wavelength of less than 300 nm.

42. NEW) The process for producing a resincemented optical element according to claim 32, which further comprises, after said mold release step, a second exposure step of irradiating the resin layer by light not comprising light with a wavelength of less than 300 nm.

43. (NEW) The production process according to claim 36, wherein the heating in said heating step is carried out at a temperature of from 40°C to 130°C.

44. (NEW) The production process according to claim 37, wherein the heating in said heating step is carried out at a temperature of from 40°C to 130°C.

45. (NEW) The production process according to claim 21, wherein said resin composition comprises:

(A) a polyfunctional (meth)acrylate;

(B) a polyfunctional urethanemodified (meth)acrylate; and

(C) a photopolymerization initiator.

46. (NEW) The production process according to claim 31, wherein said resin composition comprises:

(A) a polyfunctional (meth)acrylate;

(B) a polyfunctional urethanemodified (meth)acrylate; and

(C) a photopolymerization initiator.

47. (NEW) The production process according to claim 32, which further comprises, after said mold release step, a heating step of heating the resin layer.